

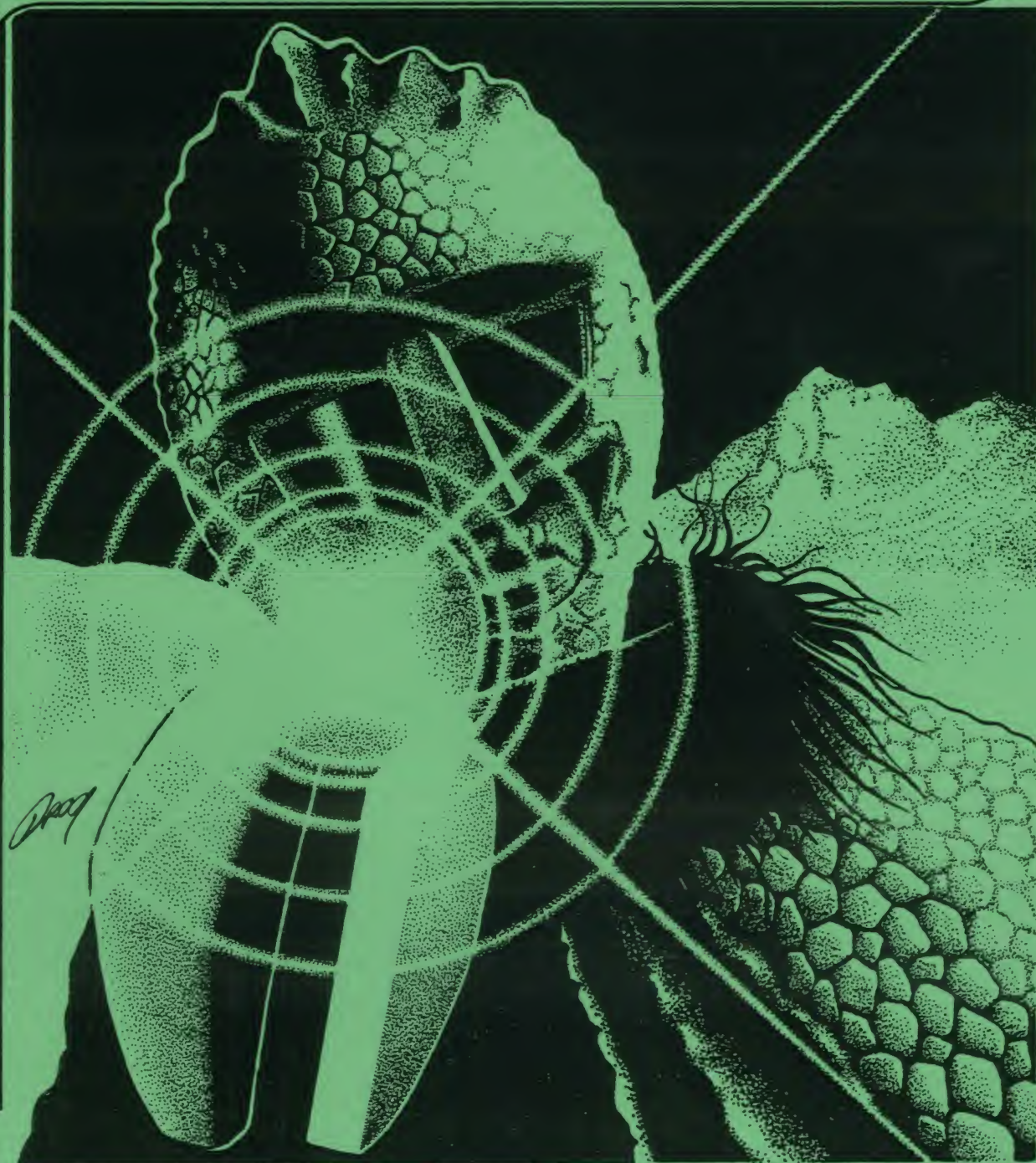
THE ICE WARRIORS



DOCTOR
WHIO



• AN ADVENTURE IN SPACE & TIME •



CODE : 00. Brian Hayles

BR 3000 A.D.

The TARDIS made a blind landing in England during the Second Ice Age. We made our way into a dome housing a splendid mansion, which was in truth a scientific establishment to monitor and check the advance of the glacier. An Ioniser was being used to this effect but the team, led by Clent, were having problems with it, so the first priority was to create a breathing space for ourselves. A temporary respite, nothing more.

A gigantic body cut out of the glacier and brought to the Base turned out to be a Martian Space Captain named Varga. He revived in the heat, kidnapped Victoria and took her, plus a power-pack, to the glacier, determined to revive his frozen crew and retrieve his ship.

We were prevented from using the Ioniser at full strength because we didn't know if the Martian ship was atomically-powered. If so, the reactor pile would have exploded, destroying the ship and the Base, and leaving the glacier free to advance. Jamie and Arden, went to find out but were ambushed by the Ice Warriors. Arden was murdered by these creatures. Jamie's legs were paralysed but he was rescued by Penley - a scientist who had defected from Clent's team because he disagreed with everyone's unswerving reliance upon computers - and brought to the Base for proper medical care.

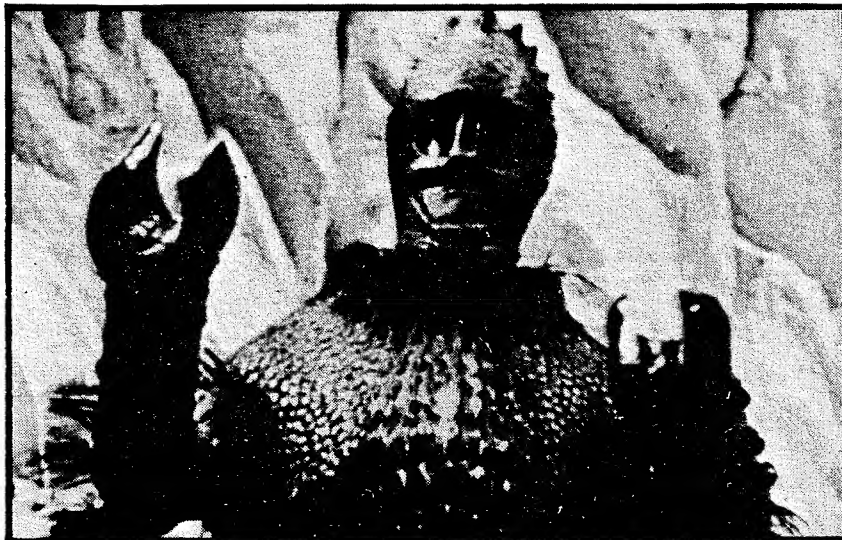
Using Penley's notes on the Omega Factor, I cured the hiccup in the Ioniser. Clent still insisted on checking it with the computer. I entered the Martian ship to determine exactly how it was powered. The Ice Warriors were also helpless, as they needed fuel for their craft. It did have an ion reactor, which might have proved dangerous but would not necessarily have exploded if the Ioniser was operated at full power. Victoria and I used phials of ammonium sulphide on our guard, Zondal, whilst Varga and another Ice Warrior marched to the Base for the necessary mercury isotopes. Zondal, however, operated the sonic cannon on Varga's command before slipping into unconsciousness, and one wing of the Base was destroyed. I changed the cannon's pulse to frequency seven which, although risky, proved harmful to the Martians and I ordered them to retreat. Luckily it didn't effect the humans too badly. This done, I put the cannon out of commission and returned to the Base, carefully avoiding the Ice Warriors.

There was no alternative now but to use the ioniser on the ship, despite the computer's commands - the stupid machine was only interested in self preservation, anyway. It was a necessary risk and Penley and I over-rode the computer. The Ioniser was operated at full power, destroying the Ice Warriors and their ship with only a minor explosion. A triumph for human irrationality over computer logic... I hope Penley and Clent make up...

$$23 \Sigma x^2$$

A

DRAMA EXTRACT



The creature was a giant. Almost paralysed with fear Victoria had retreated to the furthest corner of the little storage room and was huddled in mortal terror between the racks of scientific and medical equipment. Her eyes never left the massive, reptilian biped which stood between her and the door. For some time now it had been listening to the commotion going on in the rest of the base. Then, abruptly, it swung about and lurched towards the terrified girl, its gun arm raised to point in her direction.

"Who are you?" she blurted out. Fearing for her life, Victoria's racing mind reasoned that to draw the creature into conversation might just stall it long enough for help to arrive. To her amazement the creature halted. The hissing sound from its mouth increased as the monster sought to draw in air enough to reply.

"Varga..."

"Where are you from?" Victoria quailed.

"The Red Planet!"

Victoria thought hard, striving to recall what her father had told her about the other worlds in their solar system. "Mars...?"

The behemoth nodded, lowering its gun arm slightly. Drawing courage from this motion Victoria continued: "We thought you were dead. Then you came alive. What happened?"

Varga motioned her to be silent. "Too many questions," he hissed.

Unable to face his inscrutable gaze any longer, Victoria lowered her eyes, but amazed herself with the calmness of her next remark. "I'm curious, that's all."

"I need answers!" One of the ice-cold, clamp-like hands reached out and tilted Victoria's chin upwards so that once more she was compelled to look upon its terrible visage. "From you," it added.

"I don't think I can help you very much," she stammered.

"How long was I in the ice?"

"I don't know...I...One of the scientists said you must have been there since the first Ice Age, thousands of years ago."

Varga started at this last piece of information. "That cannot be true!"

"Were there others with you?"

"Yes..." Varga turned his head slightly, as if seeing into the distant past. "Our spaceship crashed at the foot of the Ice Mountain. As we came out to investigate, a great avalanche of snow buried us."

"Then the others are still trapped in the glacier," Victoria mused.

"I must free them. Then we will return to the Red Planet."

Victoria frowned deeply. "How? You can't get them out by yourself...?"

Again the awesome mask turned in her direction. "You will help. How was I brought to life?"

"Let the scientists here on Earth help you," Victoria pleaded.

"They would not help me. They would keep me as a curiosity, and they would leave my warriors for dead or destroy them!"

"No!" Victoria interrupted, a note of desperation in her voice, "No, they wouldn't...!"

"But with my team I can talk from strength. Then we shall decide..."

Victoria's worst fears returned as she caught the chilling implications of these last words. She could almost sense the plans being formed within that cruel mind and took a cautious step backwards. "Decide? Decide what?"

The Martian raised itself to its full height and brandished its gun at Victoria's head. "Whether to go back to our own world...or to conquer this..."

STORY REVIEW

Gary Hopkins

In August 1900, on a bank of the Berezovka River in Northern Siberia, the perfectly preserved corpse of a mammoth was freed from its frozen tomb. The creature, although still fresh and intact, had been dead some 30,000 years, protected by the permafrost...



These simple historical facts inspired Brian Hayles to write 'The Ice Warriors', a new six-part adventure for 'Doctor Who'; but if the origin of the story derives from fact, certain plot elements can be traced back to the cinema of the 1950's. Howard Hawks' 'The Thing' concerns the discovery of an alien, buried in the Arctic wastes after its spaceship has crash-landed there. While paying homage to this particular film, however, Hayles locates his action thousands of miles and almost as many years away from Howard Hawks, for 'The Ice Warriors' is set in England during the second Ice Age, many years in the future. Here the Arctic base is re-named Britannicus, home of a machine designed to halt the rapidly advancing glacier which threatens to crush "five thousand years of history". The alien found within the ice is not the vegetable life-form of 'The Thing', but a powerful, reptilian spaceship captain from Mars. The only other element which strongly suggests its big-screen forbear is the refuge of the scavenger Storr, where he cultivates "selected ancient food plants. Tomatoes, carrots, potatoes, strawberries" and which can be likened to the hydroponic wing of the Arctic base in Hawks' production. But there the similarities end...

Hayles' eerily futuristic scenario blends the ancient with the modern - a favourite theme of his - by juxtaposing the Georgian house location of the ioniser with the base computer and its Mechanoid-like chatter, and the bizarre costumes of the base personnel; then by the mere presence of the Martian Varga, an armoured warrior at first believed to be "a giant among prehistoric men" and later found to be an astronaut from a sophisticated but militaristic race of people. The blend works surprisingly well, reinforcing Penley's argument for Man's ingenuity against his blind obedience to, and reliance upon, technology, but succeeds best because of its visual impact. The action shifts comfortably between the house, the ice-face, Storr's refuge and the Martian spaceship and remains convincing throughout, despite the fact that all is achieved predominantly in a TV studio. But by far the most striking feature of 'The Ice Warriors' is the monsters themselves, their menace emphasised by the contrast they form with other characters in the story. Headed by actor Bernard Bresslaw, the Martians tower above the rest of the cast, none of whom are taller than six feet, and present an extra challenge to the BBC cameraman and his tight two-shots. From the moment they first appear, the "Ice Warriors" are utterly fascinating, at once creatures of great strength and grace, beauty and ugliness, noble warriors with sharp, intelligent minds but hearts of pure flint.

Pitted against the Martians is a collection of well-observed characters, their potential realised by one of the most powerful and distinguished casts ever assembled for 'Doctor Who'. Peter Sallis (better known in later years as Clegg in 'Last of the Summer Wine') plays the unlikely hero Elric Penley, the cool, rational, renegade scientist who finds much in common with the Doctor. Leader Clent, the manic, "hopelessly temperamental" man in charge of the base, is portrayed by Peter Barkworth, an actor much given to dealing with the intricacies of character who makes Clent's increasing paranoia seem quite real, while also bringing genuine sadness to the part. Wendy Gifford's confused Miss Jane Garrett is less appealing,



Costume Design

(Martin Baugh)

Jeremy Bentham

It is ironic that some of the people most responsible for 'Doctor Who's' success on screen get the least credit. Praise for the Daleks went to Terry Nation with few even aware of the contribution made by Raymond Cusick. Likewise, only a handful of people ever appreciated the weird voices, sounds and background atmospherics designed by Brian Hodgson who, for years, was identified only by the global credit given to the Radiophonic Workshop each episode. Similarly, few have ever recognised the considerable boost given to 'Doctor Who' by the appointment of Martin Baugh as Costume Designer for the fifth season.

Baugh joined the BBC in 1965 having previously made a name for himself working as a Designer for the Mermaid Theatre in London, where he was required to have a working knowledge of all fields of design: costumes, make-up, scenery, props and even some minimal experience of special effects. However, it was in the area of costumes that Baugh excelled and it was on these merits that he moved to the BBC at the youthful age of 25 as a fully-fledged Costume Designer.

His first 'Doctor Who' was 'The Abominable Snowmen' (Serial "NN"), for which he created the Yeti. Baugh produced the production sketches for the Yeti in great detail such that Visual Effects could handle their side - the spheres, hands and feet - and Costumes could tailor their contributions onto the four Wardrobe-made monsters with as few problems as possible on the final match-up.

No sooner had Baugh launched the Yeti on the path to fame and notoriety, than he found he had done exactly the same with his next creations - the Ice Warriors.

Brian Hayles' script for this story had made only passing references to the Martians being reptilian. Much greater emphasis had been laid on their being cyborgs - basically humanoid in shape, but fastooned with a wealth of electro-mechanical aids. To Martin Baugh this gave them an uncomfortable resemblance to the Cybermen, so he chose to ignore this side of their concept and concentrate instead on the reptilian qualities.

Director Derek Martinus briefed Baugh that four of the actors playing Warriors would be over six-feet tall, but that the leader, Varga, would be portrayed by no less than 6' 7" actor Bernard Bresslaw. Varga's costume would thus be the most expensive, as it would need to be tailored to fit Bresslaw's giant frame.

Abandoning totally the idea of clothing the Warriors, Baugh designed them fully as biped reptiles. Quickly



realising that much of the costume would be beyond the scope of the BBC's Wardrobe Department, he commissioned a firm of boat builders to make the fibre-glass shell comprising the Warriors' heads and bodies. Varga's head would be different to the other four, with more of the mouth area visible to facilitate an acted performance by Bresslaw. The legs and arms were moulded in heavy latex rubber, with the arms incorporating sets of plastic clamps to serve for the Warriors' hands. The wrist guns were likewise moulded into the arms, but such that the light on the torch could be actuated by a set of contacts fixed to the hand clamp. Thus, when a Warrior closed his hand the light on the gun would come on. However, to ensure against the lights being illuminated unintentionally, the wiring was mostly left disconnected.

The arms and the legs were attached to the actors by straps. The leggings were worn as trousers with a set of braces holding them up, while the arms were slung around the shoulders and held taut by elasticated straps. Over these the two-piece body shell would be belted together, with the final touch being the placing on of the helmet.

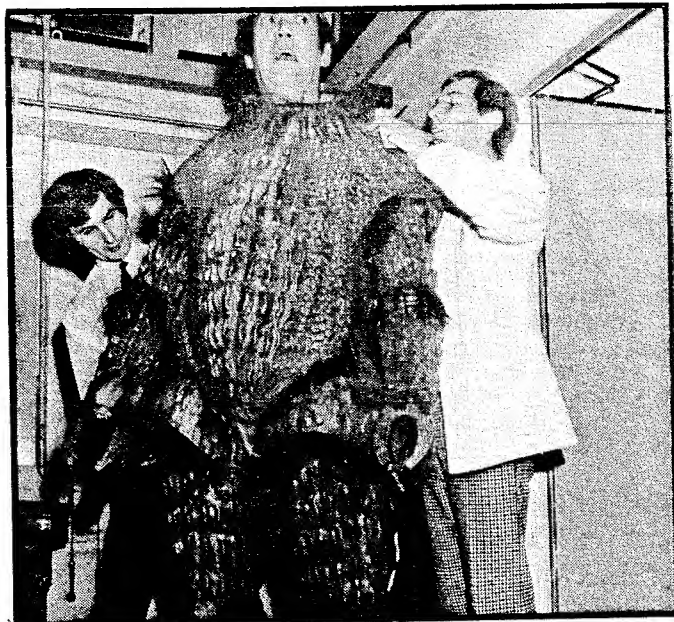
One idea Baugh discarded was a plan to build lights in behind the perspex eye-shields to show Varga coming back to life and, later, Turoc stalking Victoria through the ice caves using his electronic vision as a kind of tracking sensor. The reason for this was heat. Fully garbed, an Ice Warrior actor would sweat off nearly a pint of body water in less than an hour. For this reason the actors wore just the body shells for dress rehearsals, with the head pieces used only on live "takes". To have added even low wattage lights behind the shields would have been to risk actors passing out due to the intense heat generated inside the mask.

Compounding all this was the requirement for Bresslaw and his team to have special latex make-up applied to their mouths and eyes to complete the illusion of their being reptiles.

The finished Ice Warrior costumes were, therefore, quite uncomfortable for the actors inside them, not least because they could not sit down once the body shell was belted on. To compensate for this Derek Martinus had leaning boards provided for the actors so that they could, to a degree, relax between "takes".

The heat question was a bother to Martin Baugh so no-one was more relieved than he when 'The Ice Warriors' received such a rapturous reception from the 'Doctor Who' audience. Only one viewer was left unmoved: Martin and Louise Baugh's two-year-old daughter, Anna, who took one look at them and proudly re-named them "doggies".

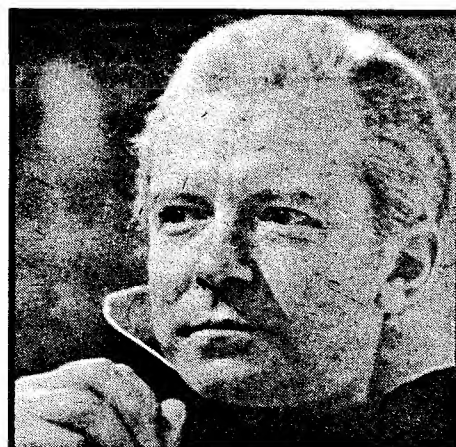
At the time of 'The Ice Warriors' being transmitted the heat question was still uppermost in Baugh's mind as he approached his next assignment for 'Doctor Who'. Having designed two of the series' "big four" monsters, his next task was to re-design the foe all too infamous for occasioning fainting actors - the Cybermen!





The Ice Warriors Cometh

Paul Mount



"...A kind of reptilian biped that might conceivably just have existed."

In creating the Ice Warriors for his 1967 serial of the same name, Brian Hayles' initial intention was to come up with a creature which veered away from the 'robotic' mould of the Daleks and the Cybermen.

That he should create a monster which would rival the series' most popular alien adversaries is particularly interesting when considering his previous work both within and without the confines of 'Doctor Who'.

Born on the 7th March 1930 in Portsmouth, Hayles foresook a career in sculpting to qualify as an art teacher, whereafter it took him a year in Canada to decide that he was more suited to writing. After a further nine years at a private Birmingham school he felt confident enough at least to attempt to write full-time, which led to his involvement with such series as the TV drama 'United' and the long-running radio saga centring on the fortunes of 'The Archers'.

'Doctor Who' beckoned when producer John Wiles approached Hayles soon after the screening of his science-fiction serial 'Legend of Death', and the product of this involvement was 'The Celestial Toymaker', the highly-acclaimed 1966 fantasy serial which, due to its nature as

a "psychological horror play" (as Hayles himself once described it), had to be substantially re-written by Gerry Davis.

A little later, Hayles' rather more prosaic second script for 'The Smugglers' concluded the third recording block of the series. Although it was a lively and atmospheric costume romp, Hayles himself was not too enthusiastic about it: "I don't think 'Doctor Who' blends happily with history. You can have some fun at its expense, but it's not the best way to do it."

It was, however, only with his third serial for 'Doctor Who' that Brian Hayles' fertile imagination struck paydirt. The Ice Warriors, who came about after Hayles had read about "some Mammoth...discovered in Russia, buried in the ice..." were an instant success, due in no small part to the remarkable performance of Bernard Bresslaw as their leader Varga, who also originated the Warriors' distinctive rasping vocals. Hayles remembered that "suddenly you had people walking up to you and doing this sort of Ice Warrior whisper bit". For a writer, especially of 'Doctor Who', this kind of response spells a palpable success in the offing.

But for both Brian Hayles and his Ice Warriors, this was only the beginning...

RADIO

Issue dated:
11th. - 17th.
November 1967

DR WHO on Ice

The crew of the
Tardis face
new enemies—
the Ice Warriors



Deborah Watling with Leading Ice Warrior Bernard Bresslaw

1 In the new series of adventures, starting tonight, the Tardis returns to England—but England in the year A.D. 3000, in the grip of the Second Ice Age. Some scientists have set up an emergency base near where the Tardis lands, and they are struggling to keep the ice barrier back.

But this is not the only peril that the Doctor, Jamie, and Victoria face. There are the Ice

Warriors, alien creatures from the planet Mars, who are trapped with their space ship in the ice, and their attempts to free it bring them into conflict with the scientists.

The leader of the Ice Warriors, Varga, is played by Bernard Bresslaw, but once he's got his costume and make-up on he'll be pretty unrecognisable. 'I'm all dressed up in a sort of skin,' says Bernard, 'in fact I look like a six-foot lizard!'

TIMES

TECHNICAL OBSERVATIONS

All six episodes of 'The Ice Warriors' featured a specially designed title graphic, over which were laid the caption slides of the story title, author and episode number. It depicted a collage of snowy wastelands, to the accompaniment of a thin "reedy" soundtrack of electronic music composed by Dudley Simpson. The caption slides gradually "bled" into focus overlaying the white snowscapes.

One of the most elaborate props provided for this story by senior Visual Effects designers Bernard Wilkie and Ron Oates was the base computer, termed ECCO in the novelisation. The terminals took the form of video monitors mounted into spherical cowls, each showing a picture of an electronic eye. The finished effect was thus of a giant, staring eyeball. These terminals were, in turn, mounted on a series of cantilevers, such that the screens could be swung freely about the operations rooms to face anyone who wanted to communicate with the computer. The voice tracks for the computer, spoken by Roy Skelton, were pre-recorded and then modulated by Brian Hodgson.

The costumes worn by the technicians in this story were designed after the patterning of integrated circuits. Martin Baugh (see page "39-07") admitted to being a fan of 'New Scientist' as a source of inspiration for 'Doctor Who'.

All the scenes at the glacier face were filmed at Ealing to facilitate the avalanche sequence and to give a necessary sense of 'outdoors' to the sequences.

The Vidi-Con wrist communicators were both props and full-size mock-ups. Wilkie and Oates designed small TV screen "wrist watches" for the scientists that were, of course, non-functional. For close-up purposes a studio monitor had a large, arm-shaped frame fitted around it.

A model stage was constructed at Ealing showing the glaciers around the dome of the base. This was a fairly large set, substantial enough to allow the small TARDIS model to materialise atop a snowdrift, topple over and then slide down the slope, coming to rest finally, on its side, outside the main doors to the dome. A cut was then performed to the full-size TARDIS prop on its side, ready for Troughton to clamber out.

The base was represented by a glass painting showing a Georgian mansion underneath the dome. This was only ever used for establishing shots and so appeared as a caption slide.

A lightweight block of ice was constructed out of perspex for the scenes of Arden's men extracting the block containing Varga from the ice and bringing it back to base. This "ice-block" contained only Varga's suit for the purposes of lightness. Therefore, Bernard Bresslaw was not required for the studio taping of the first episode. The scenes of him coming back to life as the ice block melts were all done in a series of telecine inserts at Ealing.

For the actual scenes of the avalanche which kills Davis, the BBC negotiated the rights to hire some film from the Rank Organisation at Pinewood. The longest sequence of stock film used was less than five seconds in length.

Although Varga uses his gun in episode two the familiar distortion effect was not seen in this episode. As the Martian fires at the glacier the effect seen was a simple zooming-in and zooming-out as the ice begins to glow under the impact of the sonic waves.

The final shot of episode two showing the four Warriors, each frozen in his own ice block, was a model shot. Each miniature block contained one Warrior; one in a kneeling position, one crouching, etc. There was no reprise of this model for the opening of episode three. The first sequence, after the title graphics, showed the four Warriors standing on crumbled pedestals of ice and slowly starting to move. Flakes of ice (in reality shards of toffee glass) falling from their bodies suggested their awakening state.

The sequence in which the Warriors blast a cavern towards and around their ship was handled mechanically with chunks of ice (toffee glass) tumbled from above, giving the impression of the cave being blasted into existence. Clever camerawork completed the illusion.

The first instance of the distortion effect was thus the

killing of Arden, which for ease of controllability was done on telecine. The film camera was positioned such that it was looking at a tall frame, over which a sheet of mirrored foil was stretched taut. The reflection of the section in the mirror was viewed by the camera, and the image was made to distort by lightly pressing the foil from behind.

The inlay process was used to super-impose a moving cross-hair sight onto the picture representing Zondal tracking the spaceship's sonic gun towards Victoria as she tries to communicate with Britannious Base out in the cave.

The large sonic gun prop was mounted on a trolley affair behind the gun shutter on the Ice Warriors' ship. As the shutter opened the muzzle dish of the gun was slid out on cue.

The pursuit of Victoria by Turec through the caves was all shot on film at Ealing. The set was fairly large and built mostly from moulded polystyrene, although with more rigid sections for the crevices through which Victoria squeezes. The most spectacular prop was a toffee glass wall of ice through which Turec crashes. Later, as Turec is killed by an avalanche, the death blows are provided by large chunks of falling polystyrene. A shaking camera achieved the imagery of the quake.

The cave chase sequences were accompanied by a specially composed theme written by Dudley Simpson and performed by him, Stan Barrett and Roy Webster. Singer Jeanne Brown was hired for this and the first episode to back the music with some high key choral tones.

There was a large, wall-mounted map in the base on to which was back-projected a pattern of white light representing the current configuration of the glaciers.

Episode Five featured a small amount of exterior-shot footage as Penley helps the wounded Jamie back to the dome. Using a "snow-machine" - a device similar to the dry powder fire extinguishers - an area of forest was made up to look suitably wintry. The attack on the two men by a polar bear was achieved first by using a stock footage insert from the BBC's film library, and secondly by the film camera taking the bear's point of view as it charges.

Electrically detonated smoke cannisters, hidden behind the props in the spaceship interior, doubled for the Doctor's phials of poison gas which he uses to disable Zondal.

More electrically activated smoke charges and "whizz-bangs" were used for the sequence of the Ice Warriors blasting the base with their sonic cannon. A rocking camera completed the illusion.

A downwards-looking periscope attachment was fitted to the lens of one studio camera for the shot where we see, from the point of view of the stunned Walters, a shot looking almost vertically upwards at the Ice Warriors as they enter the Ioniser Room. This same periscope was used for extreme floor level shots of Walters himself as he reaches for a gun.

The subsequent death of Walters was the first use of the distortion effect in the electronic studio.

The melting of the glaciers under the power of the Ioniser was done on the model stage. The glaciers were designed and built to collapse on cue, with liberal dustings of bicarbonate of soda achieving, in small scale, the look of an avalanche. For close-up shots solid cakes of bicarbonate of soda were moulded into the shapes of glaciers and then fine-sprayed with water to make them crumble under the eye of the film camera.

The destruction of the Ice Warriors aboard their ship was done by dissolving to white as the Ioniser's rays hit the ship. This was done to avert any necessity of seeing the Ice Warriors falling to the floor as they died. In those costumes such a feat was not possible!

The final shot, as the now-upright TARDIS dematerialises, was done by inlaying a picture of the model TARDIS over a caption slide of the base exterior, and then fading the model image out.

Two photo-captions of icy landscapes were seen in background to the slides naming the Producer and Director.

Episode Six was followed by a one-minute trailer for the next serial, 'The Enemy of the World', voice-over narrated by Dick Graham. It showed the Doctor watching a speech by Leader Salamander on a screen in Giles Kent's office.

PRODUCTION CREDITS

SERIAL "00"

SIX EPISODES

BLACK AND WHITE

| | | |
|--------|---|---------------------|
| PART 1 | - | 11th. November 1967 |
| PART 2 | - | 18th. November 1967 |
| PART 3 | - | 25th. November 1967 |
| PART 4 | - | 2nd. December 1967 |
| PART 5 | - | 9th. December 1967 |
| PART 6 | - | 16th. December 1967 |

CAST

Doctor Who.....Patrick Troughton
 Jamie.....Frazer Hines
 Victoria.....Deborah Watling

Miss Garrett.....Wendy Gifford
 Clent.....Peter Barkworth
 Arden.....George Waring
 Walters.....Malcolm Taylor
 Davis.....Peter Diamond
 Storr.....Angus Lennie
 Penley.....Peter Sallis
 Voice of Computer.....Roy Skelton

Ice Warriors:

Varga.....Bernard Bresslaw
 Zondal.....Roger Jones
 Turoc.....Sonny Caldinez
 Rintan.....Tony Harwood
 Isbur.....Michael Attwell

Operators in Control Room. Ann Jarvis
 Kathy Fitzgibbon, Monique Briant
 Stan Hogan, Alec Coleman

Technicians.....Donald Sinclair
 James Holbrook, Gary Dean
 Frankie Dunn



TECHNICAL CREDITS

Production Assistant

Snowy Lidiard-White

Assistant Floor Manager

Quenton Annis

Assistant.....Sheenagh Tuckwell
 Grams Operator.....Pat Heigham
 Vision Mixer.....Jim Stevens
 Floor Assistant.....Alan Benson
 Lighting.....Sam Neeter
 Sound.....Bryan Forgham
 Technical Manager.....Tommy Dawson
 Film Cameraman.....Brian Langley
 Film Editor.....Michael Lockey
 Visual Effects.....Bernard Wilkie

Ron Oates

Special Sound Effects..Brian Hodgson
 Costume Supervisor.....Martin Baugh
 Make-up Supervisor.....Sylvia James
 Incidental Music.....Dudley Simpson
 Story Editor.....Peter Bryant
 Designer.....Jeremy Davies
 Producer.....Innes Lloyd
 Director.....Derek Martinus

